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WARRANTY

H.E.R.O. WARRANTY

H.E.R.O., guarantees this airless pump to be free of defects in materials and workmanship to the original owner, for a period of one full year from the date of purchase.

The warranty entitles the owner to parts replacement at no charge. The parts replacement warranty is valid for any necessary replacement, weather caused by material or workmanship defect or simple wear. H.E.R.O. Industries offers no warranty on the hoses, gun, tip or accessories, plastic, rubber, other soft goods or motor used in or supplied with the H.E.R.O. sprayer.

In addition to the general coverage listed above, a 5 YEAR WARRANTY is offered on the Drive Train components. The drive train components are defined as the items contained within, but not including, the "Drive Housing". Drive motor and clutch not included.

Furthermore, this warranty does not cover, damage or wear caused by faulty installation, abrasion, corrosion, inadequate or improper maintenance, negligence, or accident.

Motor, accessories, etc., which are supplied by other manufacturers and are attached to or supplied with the H.E.R.O. airless pump, are warranted only to the extent that these parts are warranted by their respective manufacturers. Warranty claims on these items must be made directly to such manufacturers or their local authorized service depots.

The warranty is only applicable to the original purchaser and provided the equipment has been properly used, operated and maintained in accordance with all instructions, precautions and warnings contained in this manual. For the purpose of this warranty, damage resulting from accident, abuse, improper cleaning, storage, fire, flood, or Act of God, is not covered.

H.E.R.O.'s liability is limited to replacing parts found to be defective or worn and does not include; transportation costs, damage or other expenses of any kind incurred in connection with the purchase and use of this sprayer.

Repairs claimed under warranty must be performed by an authorized H.E.R.O. Service Center, using only genuine H.E.R.O. parts. Parts required under warranty will be supplied by your local H. E.R.O. Service Center.

DO NOT return warranty parts to factory without authorization.

To qualify for the warranty, the warranty card (attached to this page) supplied with this H.E.R.O. airless pump, must be completed with equipment serial number and signed by the purchaser, and postmarked within ten (10) days of purchase.

IMPORTANT SAFETY PRECAUTIONS

IMPORTANT

AS WITH ALL MECHANICAL EQUIPMENT, PROPER OPERATING AND MAINTENANCE PROCEDURES ARE REQUIRED TO KEEP YOUR H.E.R.O. AIRLESS PUMP PERFORMING TO YOUR SATISFACTION. THE FOLLOWING SAFETY, OPERATING AND MAINTENANCE INSTRUCTIONS ARE IMPORTANT.

Read and understand this manual completely, especially with regard to all **safety precautions**. Read and follow instructions on all warning labels on your equipment. Keep these warning labels clean and readable at all times. Order new labels from your local distributor or from H.E.R.O. if needed.

This system is capable of producing 3000 psi (spray pressure). To avoid rupture and injury **DO NOT** operate this pump with components rated less than 3000 psi working pressure (including but not limited to spray guns, hose and connections).

Before servicing, cleaning or removal of any part, shut off power and relieve pressure.

WARNING

Prior to the use of the sprayer, ensure that the grounded continuity between the gun and the sprayer is maintained. The hose shall be at least 50 feet in length. All hoses, guns, and accessories shall be suitable for the maximum pressure (3000 PSI). The gun shall be provided with a "Safety" which locks the trigger in the "OFF" position. **DO NOT** point the gun at another person or spray at operator's exposed skin. If there are any special or unique conditions for this appliance, they shall be further noted and addressed and must be followed.

The manufacturer shall not be responsible for any loss, damages, or injury of any kind or nature whatsoever resulting from the use of equipment other than in strict compliance with the instructions, cautions and warnings contained in this operating and instruction manual and as displayed on the face of the equipment.

Never place fingers near spray tip of gun. **Never** point gun toward any part of the body, or that of any other person. Material issuing from the spray tip is at high pressure. If fingers, or any part of the body are placed near the tip of the spray gun, it is possible that the spray could break the skin and inject some of the material. **If injury does occur, seek the immediate medical attention.** Be prepared to inform the doctor what fluid was injected, if the injury is of an injection nature. **Never** treat the situation as a simple matter. Equipment and chemicals, when used improperly can be dangerous.

IMPORTANT SAFETY PRECAUTIONS

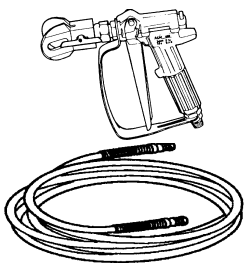
- ☒ **NEVER** place any part of the body in front of the spray tip or aim the gun toward any part of the body.
- ☒ **NEVER** point the gun toward any individual.
- ☒ **NEVER** treat any injury as a simple cut. If injury does occur, seek immediate medical attention. Be prepared to inform the doctor what fluid was injected.
- ☒ **NEVER** allow another person to use the sprayer unless they are thoroughly instructed on its operation and have read all safety precautions in this manual and all safety warning labels attached to unit.
- ☒ **NEVER** use around children.
- ☒ **NEVER** attempt to perform any maintenance or service on any part of the unit spray system without first;
 1. Shutting the motor ON/OFF switch to OFF.
 2. Relieving all pressure in the pump by triggering the gun.
 3. Locking gun trigger in "LOCKED" position, with gun locked closed.
 4. Open prime valve to drain.
- ☒ **NEVER** operate the sprayer without the tip guard complete and in place.
- ☒ **NEVER** spray any material in the vicinity of open flame, pilot lights, electrical outlets or any other source of ignition.
- ☒ **NEVER** spray volatile materials with flash points lower than 140 F (60 C).

INTRODUCTION & UNPACKING

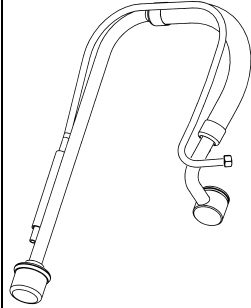
Congratulations on your purchase of a new H.E.R.O. H2K airless paint sprayer. We are sure you will enjoy owning and operating your new sprayer. With H.E.R.O. airless spray equipment you will enjoy the features and benefits of this airless. You are spraying paint, not air, and the paint is driven to the painting surface in a clean, fan shaped spray which penetrates all cracks and corners. To attain these results, you must adjust the pressure as low as possible. We recommend that you become familiar with your H.E.R.O. unit. Discuss with your dealer the useful accessory items they do offer - various types of tips, extension poles for hard to reach areas, extra hose, etc. Use of accessory items is often the difference between a good job and an excellent one !

Your H.E.R.O. airless sprayer has been fully tested and carefully packaged to avoid damage. It should be carefully examined upon arrival to determine that the unit shows no signs of freight damage. **If any parts are found broken or damaged, immediately contact the carrier and arrange for an inspection of the concealed damaged. Claims for damage MUST be made by the CONSIGNEE and not the shipper. The carrier accepts full responsibility for the safe delivery of merchandise upon pick-up from the shipper.**

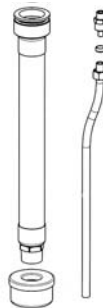
The unit shipping carton contains:



Gun & Hose
Package
50' Hose, Airless
Gun, 517 Tip
(Optional)



EC-2560
Siphon Hose
Assembly
(S and C models)



EC-2600
Siphon Hose
Assembly
(H models)



EC-1000
Unitool

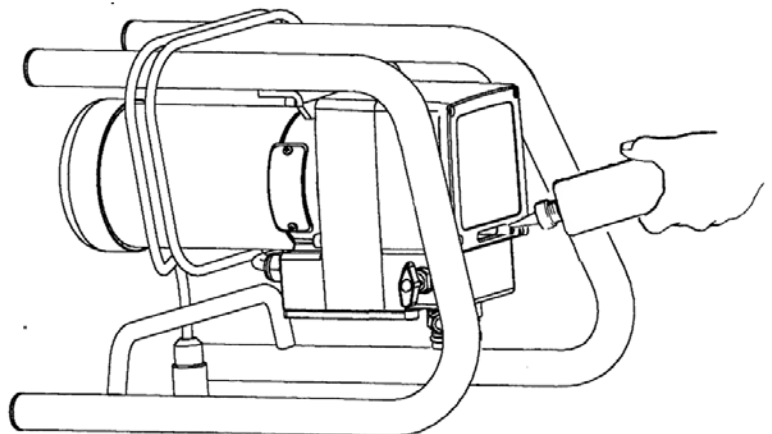


4-02-40-3PL1
Piston Lube
(8 Ounce Bottle)

SET UP, FLUSHING, PRIMING, SPRAYING, SHUT DOWN

Setting Up:

1. Attach siphon assembly to intake valve.
2. Connect Bleed hose to return fitting.
3. Attach gun to hose.
4. Attach paint hose to outgo nipple.
5. Check packing lubricant. This will help prevent buildup of materials on the piston rod thus extending packing life. To add lubricant, tilt back unit and insert pointed nozzle of the 3PL liquid into the slotted area in the front of the unit. Add only a small amount. This should be done each time it is used. Before each use, flush the pump with the correct thinner for the paint being used. ***NOTE: The unit MUST be stored with mineral spirits at all times.***



SETTING UP, FLUSHING, PRIMING, SPRAYING, SHUT DOWN

Flushing:

1. Have two pails ready; one for flushing fluid and one for waste.
2. If you are using latex paint, fill the flushing pail with approximately 1 gallon of warm soapy water. For oil based paints, use approximately 1 gallon of mineral spirits.
3. Place the siphon hose in the "flushing" pail and the bleed tube in the "waste" pail.
4. Flip open prime valve lever (Ref # 60) to fully opened position, Or on older models turn knob counter-clockwise to fully open position
5. Lower the pressure setting by turning the pressure control knob (Ref # 78) all the way counter-clockwise.
6. Plug unit in outlet.
7. Turn unit on and slowly increase the pressure until the unit starts to run and "flushing" fluid begins to exit the bleed hose.
8. Turn off unit and close the prime valve by flipping lever to closed position, or on older models turn knob clockwise to fully closed position.
9. Place bleed hose back onto the siphon hose assembly.
10. Disengage gun trigger lock and trigger gun into waste container.
11. Start unit and trigger gun into the waste container until "flushing" fluid appears.
12. Move gun to "flushing" pail and resume triggering gun into pail. Re-circulate fluid for approximately one to two minutes. Turn unit off.
13. Re-open the prime valve. Turn unit on and allow the "flushing" fluid to re-circulate through bleed valve for approximately one minute. Turn unit off.
14. When spraying latex paint, repeat the "flushing" procedures with clear water. When spraying oil based paints continue with "Priming" instructions.

Priming:

(Priming the sprayer follows the same basic step used in the "Flushing" procedures.)

1. Place the siphon hose in a clean 5 gallon pail. Install a strainer bag and secure with rubber band. Keep strainer bag at least 4 inches from the bottom of pail.
2. Pour your paint through the strainer bag. Leave the strainer in place while spraying.
3. Place bleed tube in the "waste" pail.
4. Flip open prime valve lever (Ref # 60) to fully opened position. Or on older models turn counter-clockwise fully to open position.
5. Lower the pressure setting by turning the pressure control knob (Ref # 78) all the way counter-clockwise
6. Turn unit on and slowly increase the pressure until the unit starts to run and paint begins to exit the bleed hose.
7. Close the prime valve by flipping back to closed position, or on older models turn knob clockwise to fully closed position .
8. Place bleed hose back onto the siphon hose assembly.
9. Disengage gun trigger lock and trigger gun into waste container.
10. Start unit and trigger gun into the waste container until paint appears. Stop.
11. Move gun to the paint pail and resume triggering gun into pail. Re-circulate fluid for approximately one to two minutes.
12. Turn unit off and follow the Pressure Relief Procedures
13. Install the tip guard and tip. You are now ready to start spraying.

SPRAYING & SHUT DOWN

Spraying:

1. Turn unit on.
2. Trigger gun, and increase pressure slowly. Continue to increase the pressure until the spray pattern is uniformed from top to bottom, with no heavy areas. If heavy areas are still visible at maximum pressure settings, thin paint with the correct thinner, according to the paint manufacturer's instructions. Spray test patterns onto old newspaper or other scrap material.

Always use the lowest possible pressure setting to atomize paint fully. Replace worn tips immediately, as it is not possible to obtain satisfactory spray pattern with a worn tip.

3. Check all fluid connection points for possible leaks. Correct before continuing.
4. Spray Paint. NOTE: For best results, read and practice the spray techniques shown on pages 6-7.

Shut Down:

1. Turn off unit.
2. Perform the Pressure Relief Procedures as shown on page 4.
3. Remove tip guard and gun filter. Place in your "flushing" bucket.
4. Perform the "Flushing" procedures as shown on page 5. Ensure you continue to flush the sprayer until the "Flushing" fluid is running clear and no spray materials remain in the sprayer.
5. Before storing, the final "Flushing" rinse must be made with mineral spirits, regardless of what is to be sprayed next. **NEVER** leave water or paint in the unit, even over night.
6. Clean tip guard, tip and gun filter. Re-assemble spray gun and store for next use.

AIRLESS SPRAY PAINTING SUGGESTIONS

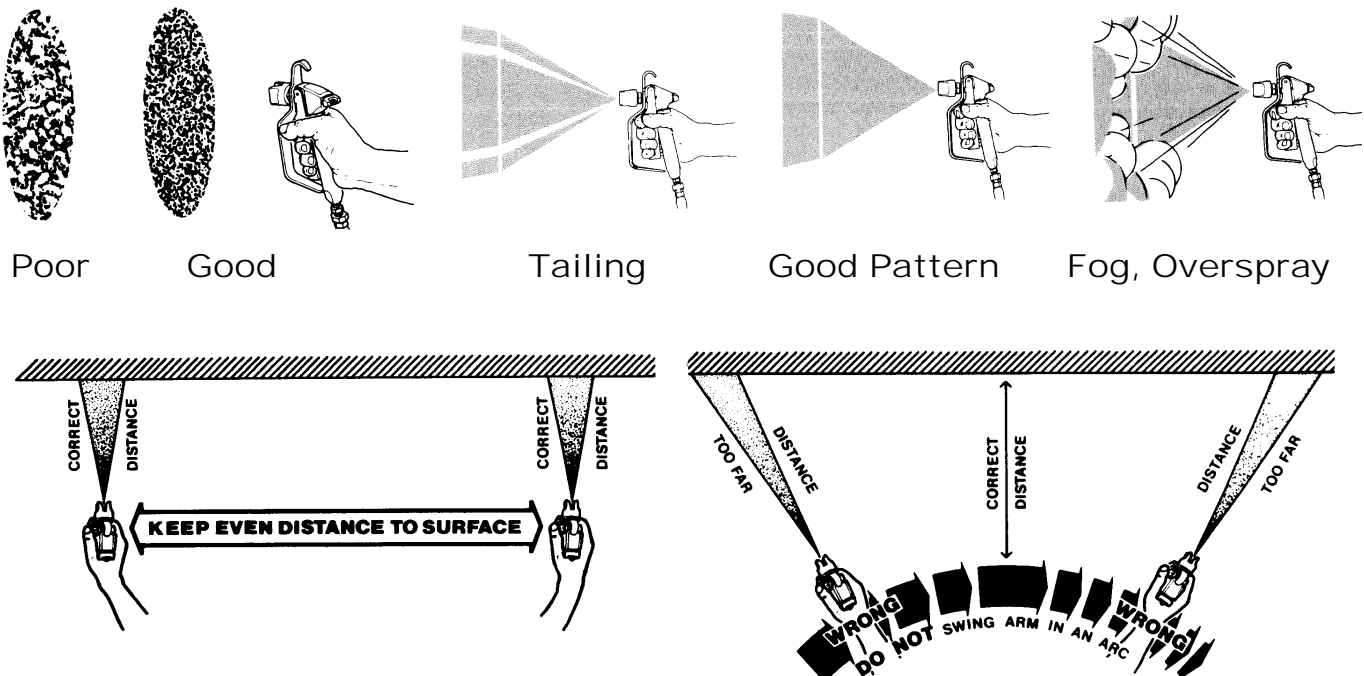
A good airless spray application is the result of many factors. Surface preparation, which includes cleaning and degreasing, priming, material compatibility, quality finish product and correct application technique. All are all important to the finished results.

The key to all good applications is a good spray gun technique. Proper application techniques can easily be learned by using the following simple guidelines. If you are not familiar with the basic spray techniques we recommend that you study this portion of the manual and practice the techniques shown. Practice your technique on scrap cardboard or old newspaper until you feel confident.

FOR EXCELLENT RESULTS, READ AND PRACTICE THESE TECHNIQUES

1. **Always strain all paint through a H.E.R.O. strainer bag.** The most common reason for airless sprayer's to malfunction is foreign matter jamming the valves or plugging the tip. Always strain the paint before putting through the pump.
2. **Always spray at the lowest pressure setting which will provide a uniform spray fan(fig. 1).** Adjust pressure control knob so that paint is completely atomized. Insufficient pressure will result in "tailing". Too much pressure will result in excess fog and over spray, excess tip wear, and increased sprayer wear and tear. See setting up to spray, page 8.
3. **Always spray at right angles to the surface being sprayed (fig. 2).** Angling or arcing the nozzle toward the surface will cause uneven coverage and excessive over spray.
4. **Always hold spray gun 11-12 inches from spray surface(fig. 3).** Too close and the fan width will be reduced and material will be applied too heavily (runs). Too far from the surface and you will have excessive over spray and light coverage (transparent).
5. **Always move the gun parallel to the surface being sprayed, at a consistent speed.** This avoids uneven coverage.
6. **Always start the spray stroke before triggering the gun and release the trigger before completing the stroke (fig. 4).** This avoids heavy build up of paint at either end of the spray stroke.
7. **Always lap your spray pattern by one half(fig. 5).** This assures full coverage of the surface being painted.

FIG. 1



AIRLESS SPRAY PAINTING SUGGESTIONS

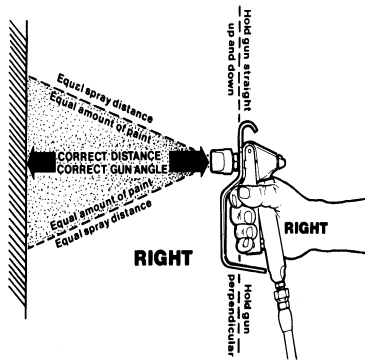


FIG. 3

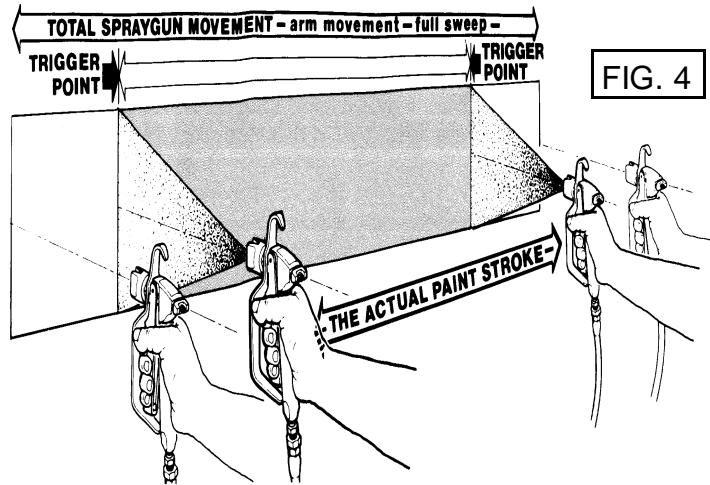
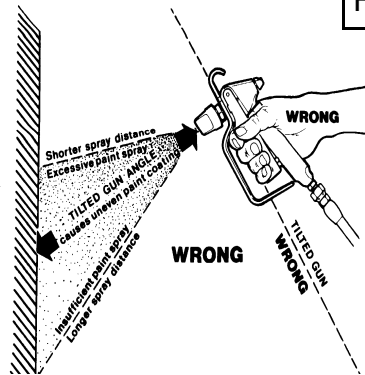
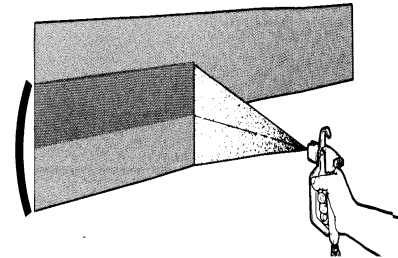


FIG. 4

FIG. 5

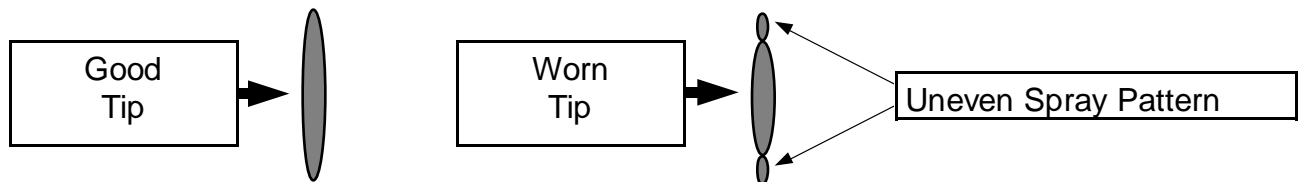


SPRAY TIP SELECTION

It is advisable to obtain a spray tip recommendation from the supplier of the material to be sprayed. The following table is a general guide and will assist in selecting the optimum tip to use.

TIP SIZE	USED TYPICALLY FOR SPRAYING THESE MATERIALS	APPROX. GPM	Suggested filter (color)
.019	Exterior Latex on large unobstructed areas.	.47	white
.017	Interior Latex, Exterior Latex, Shake Paint, Exterior Flat Paints.	.31	
.015	Alkyd Flat Enamel, Interior Latex, Semi-Gloss Enamel, Stains.	.23	
.013	Fine ground Gloss Enamels, and good quality Stains.	.18	
.011	Clear Varnishes and Lacquers.	.12	

NOTE: In order to test if a tip is worn, spray a small amount of suitable material on to a test surface and observe the spray pattern produced on the wall. Try to obtain an even elliptical spray pattern by first adjusting the pressure down, then gradually increasing pressure until full atomization is achieved. This should result in a crisp spray pattern with sharp edges and even concentration, see diagram below. If a satisfactory pattern is unattainable (look for edges to be rounded with heavier concentration), then the tip is worn and should be replaced. Other causes of poor spray fan are insufficient spray pressure and material viscosity (may requiring thinning).



NOTE: Use of excessively worn tip can result in apparent poor performance of pump.

SPRAY TIP SELECTION

ORIFICE SIZE

All tips are rated by the size of the orifice or bore size. The bore size is measured in thousandths of an inch (.017 = 17 thousandths of an inch). The size of tip required is based on the consistency of the material to be sprayed. The thicker the paint, the larger the tip size required. Always consult the product label or ask the paint retailer for the manufacturer's recommendations with regard to proper tip sizes.

FAN WIDTH

Fan width or pattern width is determined by the spray tip's "fan width" classification. This size is measured in inches, and is determined when spraying 12 inches from the spray surface and the tip of the gun. Various methods of noting the fan widths are used by tip manufacturers. Ask your distributor for assistance.

NOTE: *Two tips having the same tip size, but different fan widths will deliver the same amount of paint over a different area (wider or narrower strip).*

SPRAY TIP REPLACEMENT

During use, especially with Latex paint, high pressure and material abrasion will cause the orifice to grow larger. As the orifice grows larger, the fan width grows smaller. Replace tips before they become excessively worn. Worn tips waste paint, cause over spray, and decrease sprayer performance.

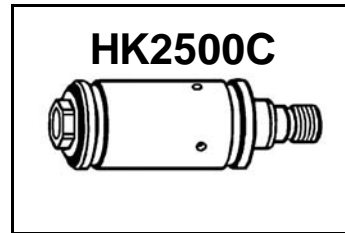
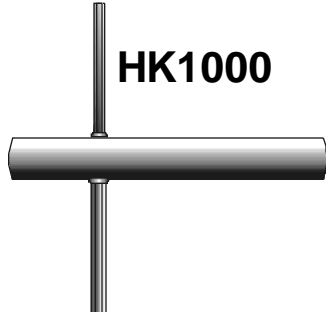
NOTE: *When using Latex paint, a spray tip will wear at the rate of one size for approximately every 100 gallons of material sprayed.*

TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
Motor will not start or run	<ol style="list-style-type: none"> 1. Unit unplugged. 2. Unit not switched "ON" 3. Pump at full pressure. 4. Pressure Control set too low. 5. Fuses on motor controller. 	<ol style="list-style-type: none"> 1. Plug unit in to a 120V, 60HZ, 2. Flip On/Off switch to ON 3. Follow "pressure relief instructions" 4. Slowly increase pressure until motor starts. 5. Replace if necessary
Motor runs, but Poor unit performance.	<ol style="list-style-type: none"> 1. Fault in pump section. 2. Worn spray tip. 3. Improper tip size. 4. Material too viscous(thick). 5. Gun filter clogged 6. Prime valve leaking 	<ol style="list-style-type: none"> 1. See fluid section repairs. 2. Replace tip. 3. Replace tip. 4. Thin material with appropriate thinners, per product manufacturer's instructions. 5. Clean or replace filter. 6. Repair or replace valve
Low or Erratic Output / Pressure	<ol style="list-style-type: none"> 1. Air leaks or blockages. 2. Worn Packings, Intake or Outgo balls and / or seats. 3. Cylinder sleeve leakage. 4. Worn spray tip. 5. Cylinder O-Rings worn or damaged 6. Prime valve leaking 	<ol style="list-style-type: none"> 1. Check the following; <ul style="list-style-type: none"> ⇒ Intake tube fitting. ⇒ Plugged intake screen. ⇒ Intake O-ring. 2. Re-pack pump. 3. Replace piston valve O-Rings. 4. Change tip. 5. Replace Cylinder O-Rings. 6. Repair or replace valve
Unit does not prime	<ol style="list-style-type: none"> 1. Worn packings. 2. Air leak. 3. Paint level too low. 4. Prime Valve clogged. 5. Paint too thick. 6. Valve ball stuck or glued. 	<ol style="list-style-type: none"> 1. Re-pack pump. 2. Check the following; <ul style="list-style-type: none"> ⇒ Intake tube connections. ⇒ Plugged intake screen. ⇒ Intake O-ring. 3. Add paint to pail. 4. Disassemble and clean. 5. Thin material with appropriate thinners, per product manufactures .instructions 6. Replace worn balls and / or seats. Clean
No Output	<ol style="list-style-type: none"> 1. Pump not primed. 2. Pump needs rebuilding. 3. Broken drive parts; con-rod pin, piston rod, valve. 	<ol style="list-style-type: none"> 1. Prime pump. 2. Rebuild pump. 3. Repair as required.
Fluid leaks from front drive housing.	<ol style="list-style-type: none"> 1. Worn upper packings. 2. Leaking transducer. 	<ol style="list-style-type: none"> 1. Replace packings. 2. Replace transducer seals.

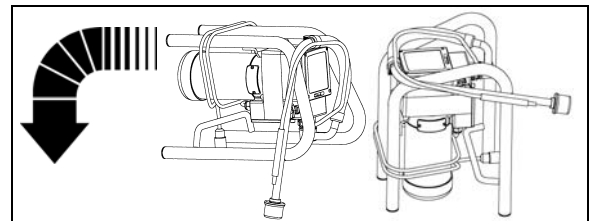
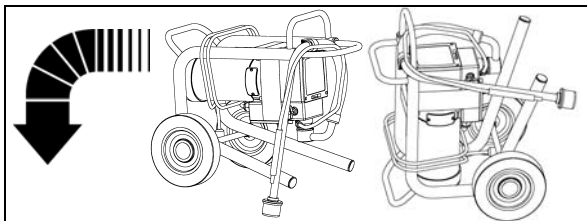
REPAIR PROCEDURES

The H.E.R.O. H2K units were specifically designed to assist the operator in dealing with the inconvenient, time consuming, and some times technically challenging concept of equipment service and repair. The H2K models offer simple, quick, easy to perform procedures for any and all the fluid section repair procedures. Servicing and the repair of the fluid section can be performed with one simple tool, the H.E.R.O. "UNI-TOOL™", (Part # HK1000). The complete fluid section can be removed and replaced in less than 5 minutes.

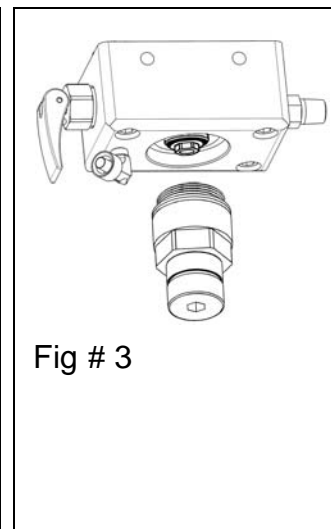
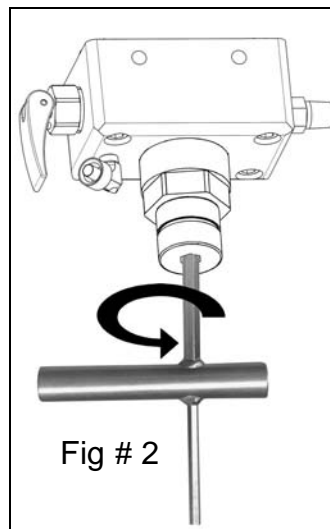
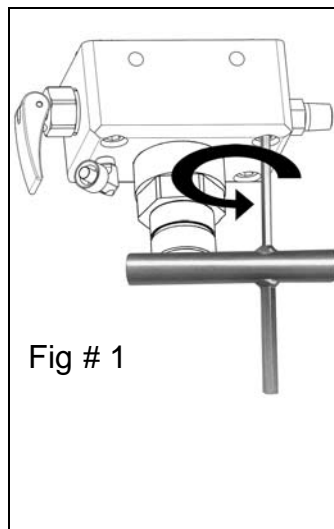


FLUID SECTION

Tip the entire unit back into a vertical position, this provides greater access to the fluid section, while making repairs.



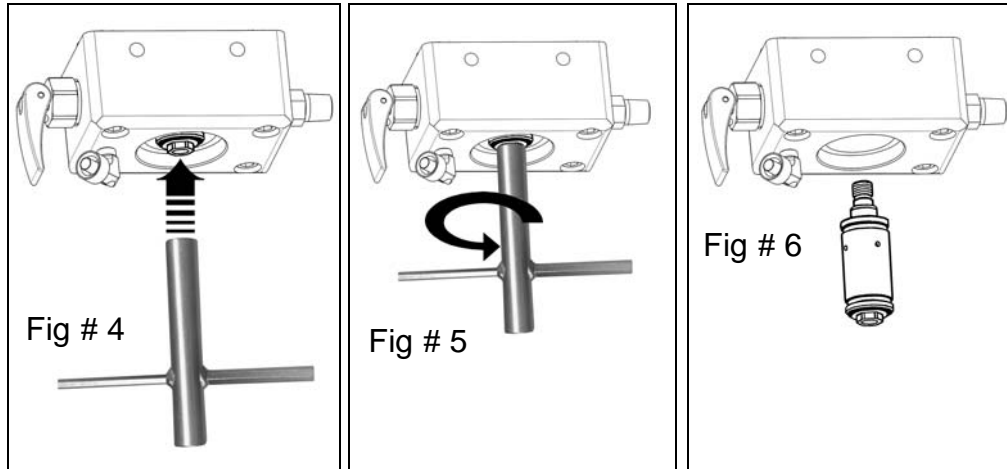
1. Complete "Pressure Relief Procedures" as described on page 4
2. Unplug unit from electrical source.
3. Remove the siphon assembly from bottom of intake valve, by pushing the release clip off to one side and pulling assembly away from the valve. **NOTE:** Bleed hose does not need be removed while servicing, however you may find it convenient to do so.
4. Using the 1/4" Hex key of your H.E.R.O. Uni-Tool (Part # HK1000, supplied with each unit), loosen the four manifold bolts counter clockwise 1/2 a turn as shown in Fig # 1.
5. Insert the 3/8" Hex key side of the Uni-Tool and remove the entire intake valve assembly by turning it counter clockwise as shown in Fig # 2.



Continued on page 10.

REPAIR PROCEDURES

6. Using the 5/8" socket end of the Uni-Tool, remove the entire fluid section assembly as shown in Fig # 4 and # 5 by turning it counter clockwise until it is fully removed from connecting rod and manifold.



The entire fluid section is now removed, awaiting further repairs or service. Refer to the various service repairs on the pages to follow. See page below for intake valve repairs, pages 10-11 for piston rod, cylinder, packing kit assembly repairs, page 11-12 for whole piston rod, cylinder, packing kit assembly replacement and unit re-assembly.

INTAKE VALVE ASSEMBLY REPAIRS

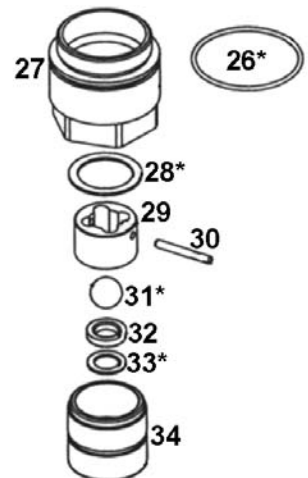
Simple cleaning and debris removal can be undertaken without dismantling the entire intake valve assembly. For component replacement, see disassembly and re-assembly instruction to follow

DIS-ASSEMBLY

Using the flat hex sides, place Inlet Fitting (Ref # 27) in a vise or hold securely with adjustable wrench. Use the Uni-Tool or a 3/8 allen key to remove the intake housing (Ref # 34) from the inlet fitting. Inspect all part for wear or damage.

RE-ASSEMBLY

1. Install intake crush washer (Ref # 33) into the intake housing (Ref # 34).
2. Insert Intake Seat (Ref # 32) into the intake housing, ensuring The beveled side of seat faces upwards.
3. Place the intake ball (Ref # 31) on to the intake seat. (Ref # 32)
4. Install the ball stop (Ref # 30) into the ball guide (Ref # 29), and place entire assembly into the intake housing (Ref # 34).
5. Apply Teflon pipe sealant or Teflon tape to the threads of the intake housing. (Ref # 34).
6. Drop inlet washer (Ref # 28) into the intake fitting (Ref # 27).
7. Screw the intake housing assembly into the intake fitting. Tighten to 100 foot pounds. Slide the O-ring (Ref # 26) onto the intake fitting.



If the removal and repair of the intake valve is the only service performed, continue by threading the intake valve assembly into the intake manifold (Ref # 39). Secure to 30 foot pounds. If piston valve repairs are to be performed, complete these before performing.

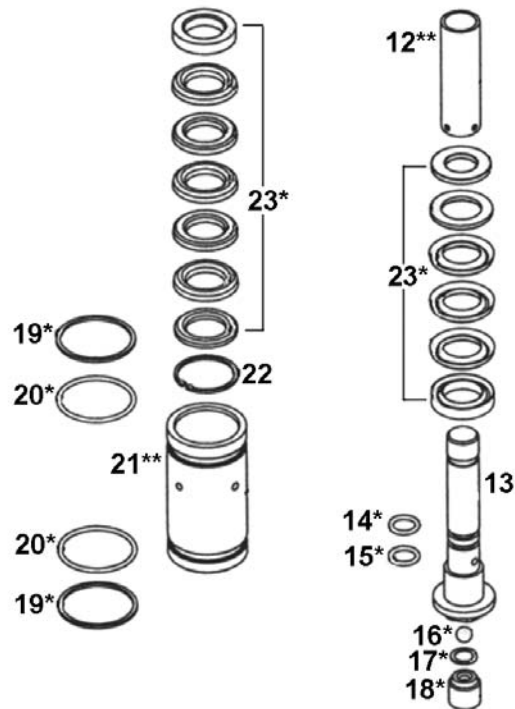
REPAIR PROCEDURES

PISTON CARTRIDGE ASSEMBLY REPAIRS – DISMANTLING

The piston cartridge assembly is available as a complete, pre-assembled cartridge for quick, on site, unit repairs. Items are also available individually for more economical repairs when time is not of the essence. We recommend keeping a new or previously re-build piston cartridge assembly in your tool box at all times, for those urgent on the job replacements. The used or worn piston cartridge assemblies can then be repaired at a more convenient time.

Remove the “Piston Cartridge Assembly” as per the instructions on page 9

1. To dismantle the piston cartridge assembly, push the piston valve body (Ref # 13), down through the cylinder (Ref # 21). This will remove all items marked Ref # 12 through 18. Note upper packings will remain in the cylinder Ref # 21.
2. Remove upper packings from cylinder.
3. Remove piston sleeve (Ref # 12) from piston valve body (Ref #13).
4. Remove lower packings from piston valve body.
5. Place piston valve body (Ref # 13) in vise or secure firmly with a 5/8” wrench, and use the Uni-Tool to remove the seat (Ref # 18) from the piston valve body (Ref # 13).
6. Remove the piston seat (Ref # 18), piston seat washer (Ref # 17) and ball (Ref # 16) from the piston valve body.



REPAIR PROCEDURES

PISTON CARTRIDGE ASSEMBLY REPAIRS – ASSEMBLY

1. Slide o-rings (Ref # 14 & 15) onto the piston valve body (Ref # 13). It is recommended to lubricate with a common grease or piston lube before sliding on.
2. Drop ball (Ref # 16) into piston valve.
3. Insert piston valve washer (Ref # 17) into piston valve.
4. Apply Loc-Tite 271 (Red) to threads of seat (Ref # 13), and screw tight using your Uni-Tool.
5. Apply a small amount of grease (common grease or piston lube) into the "V" portion of each packing set component. Re-assemble and squeeze packing set together. Remove any excess grease (leave a small portion) from the outer perimeter. **NOTE:** Our testing has shown that a longer packing life is obtained when the seals are pre-lubricated in the manner described above.
6. Slide the lubricated, lower packing assembly onto piston valve.
7. Slide the flat washer onto piston valve.
8. Slide piston sleeve (Ref # 12) onto piston valve, with the four (4) holes closest to the lower packings.
9. Assemble the back up ring (Ref # 19) and cylinder o-ring (Ref # 20) onto cylinder. The cylinder o-rings are always placed on the inner side of the cylinder, facing each other. Back up o-rings are always on the outer side of the cylinder (Far ends).
10. Slide cylinder (Ref # 21) over the piston valve and lower packings. Ensure the cylinder four (4) outlet holes are at the top (refer to diagram).
11. Insert upper cylinder clip (Ref # 22) into the cylinder. **NOTE:** This clip will remain in the cylinder during dismantling and needn't be removed.
12. Slide the lubricated, upper packing assembly (see step 7 & 8) into the cylinder until only approximately 1/8" of packings is exposed above the cylinder.
13. With piston cartridge assembly fully assembled, move back to the unit and tighten the four (4) intake manifold bolts (Ref # 38) to 30 foot pounds or with Uni-tool as shown in Fig # 1. (Loosened in step 4 of removal instruction on page 9).
14. Insert the fully assembled piston cartridge assembly (Ref # 11) into the manifold (Ref # 39) and thread into the con-rod coupler (Ref # 69) as shown in Fig # 2. Tighten to 30 foot pounds.
15. Install intake valve assembly (Ref # 25) as shown in Fig # 3 & 4.
16. Re-attach intake siphon assembly and repairs are complete.

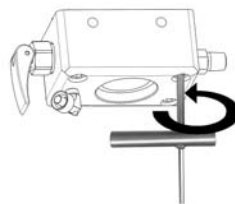
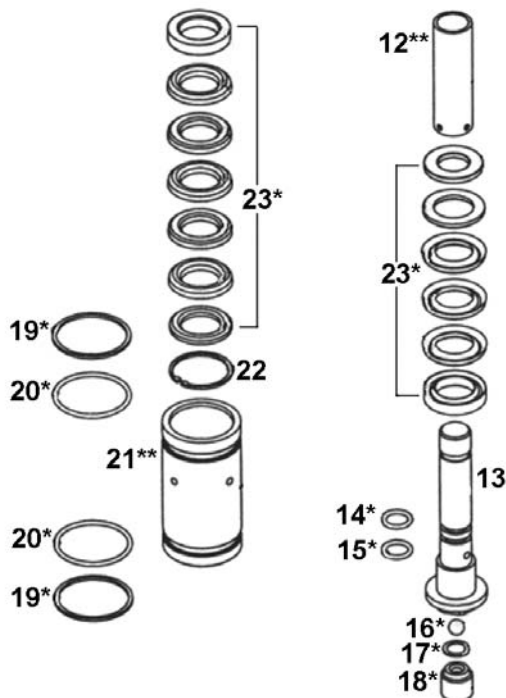


Fig #1

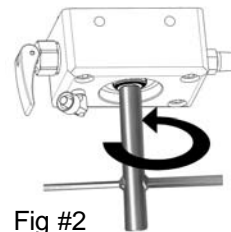


Fig #2



Fig #3

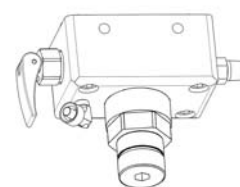


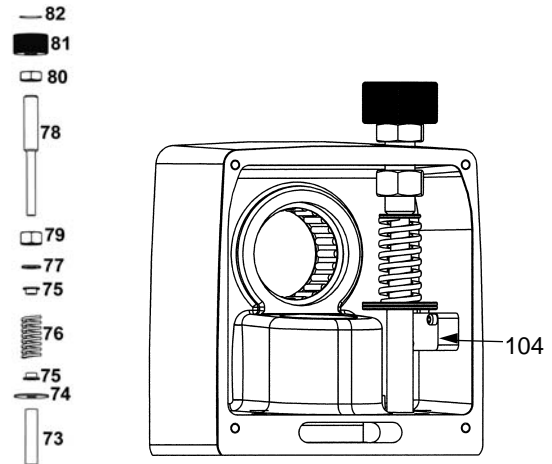
Fig #4

PRESSURE CONTROL CALIBRATION

If any component relating to pressure control is repaired or replaced, a pressure calibration must be performed. For illustration purposes, the gear housing is shown without the cover and con-rod assembly. The cover does not have to be removed to set the unit pressure.

Tools Needed

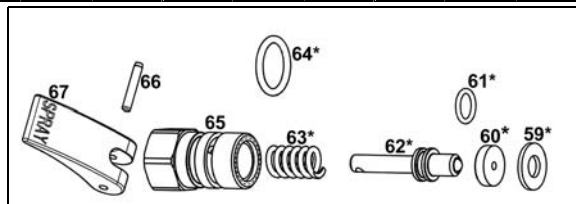
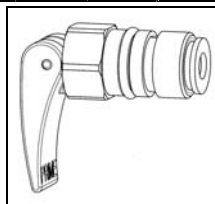
**50' nylon airless paint hose
gun with new .017 tip
4000 psi pressure gauge
Two 3/4" wrenches
flathead screwdriver**



1. Complete "Pressure Relief Procedures" as described on page 4
2. Install pressure gauge at the connection between the paint hose and spray gun or pump outlet and hose.
3. Place a 3/4" wrench on knob locking nut (Ref # 80).
4. Place a cloth over control knob (Ref # 81) and use channel lock pliers to loosen the knob. **NOTE: Knob is secured with Loc-Tite 222. (Red)**
5. The top of the stem (Ref # 78) is machined with a slot, to allow for adjustments using flathead screw driver.
6. Thread the pressure control stem down until the motor starts allow unit to prime.
7. Close prime valve and allow unit to pressurize.
8. Slowly turn the stem down until the maximum pressure (3000 psi) is achieved.
9. Trigger the gun and check the maximum pressure, adjust as needed.
10. Once the maximum pressure is adjusted. Thread down the top nut (Ref # 80), making sure that the stem is held securely with a screwdriver, until the nut contacts the housing.
11. Check the pressure of the unit again.
12. Thread the pressure control knob until it bottoms out on the nut, making sure that it is secured with Loc-Tite # 222 (Red)
13. With a pair of channel lock pliers, gently tighten the knob on to the nut.

PRIME VALVE SERVICE

Part # HK-3600



Removal

Place 5/8" wrench on flats of bleed valve housing (Ref # 65) and remove valve assembly from the manifold (Ref # 39).

Remove the seat (Ref # 60) and the Crush Washer (Ref # 59) from the manifold. Inspect for worn or damaged parts. Drive the pin (Ref # 66) out of the valve lever (Ref # 67) and separate the knob from the stem.

Remove stem and spring from the valve housing. (Ref # 65)

Remove and replace stem seal (Ref # 61).

Installation

Repair kit is available to rebuild prime valve. Order part # HK-3600RK

Lubricate the seal and install the spring and stem in the reverse fashion. Install the knob and pin.

Flip lever to the open position to allow stem to move back, apply a liberal amount of grease to both sides of seat.

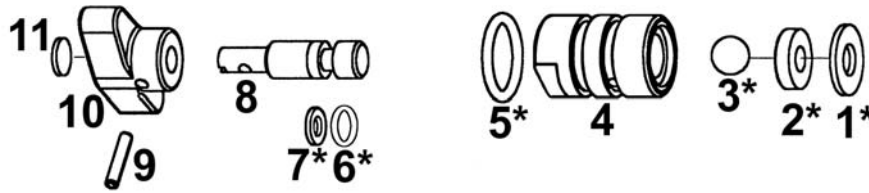
Place into end of housing, with the tapered end towards the ball. Add crush washer to the assembly. The grease will hold the parts to gather while you thread the assembled parts into the manifold.

Tighten securely.

NOTE: The grease will be flushed out during the prime cycle on the next use.

PRIME VALVE SERVICE

Part # HK-3500B (older version)



HK-3500B PRIME VALVE		
Ref #	Part #	Description
1	11A-3CP	Crush washer
2	11A-4	Prime valve seat
3	11A-5TC	Prime valve ball, tungsten carbide
4	HK-3005	Prime valve housing
5	02-22-2007	Body o-ring
6	606-8	Stem o-ring
7	606-15	Back up ring
8	HK-3010	Prime valve stem
9	HK-3020	Pin, Prime valve knob
10	HK-3015	Knob, prime valve
11	HK-3030	Label, "close"
*	HK-3600BRK	Prime Valve Repair Kit, Includes Ref # 1-3, 5-7

Removal

Place 5/8" wrench on flats of bleed valve housing (Ref # 4) and remove valve assembly from the manifold (Ref # 39).

Remove the ball (Ref # 3) seat (Ref # 2) and the crush washer (Ref # 1) from the manifold. Inspect for worn or damaged parts.

Drive the roll pin (Ref # 9) out of the valve knob (Ref # 10) and separate the knob from the stem.

Unthread the stem from the valve housing (Ref # 4).

Remove and replace stem seals, taking note of their correct sequence

Installation

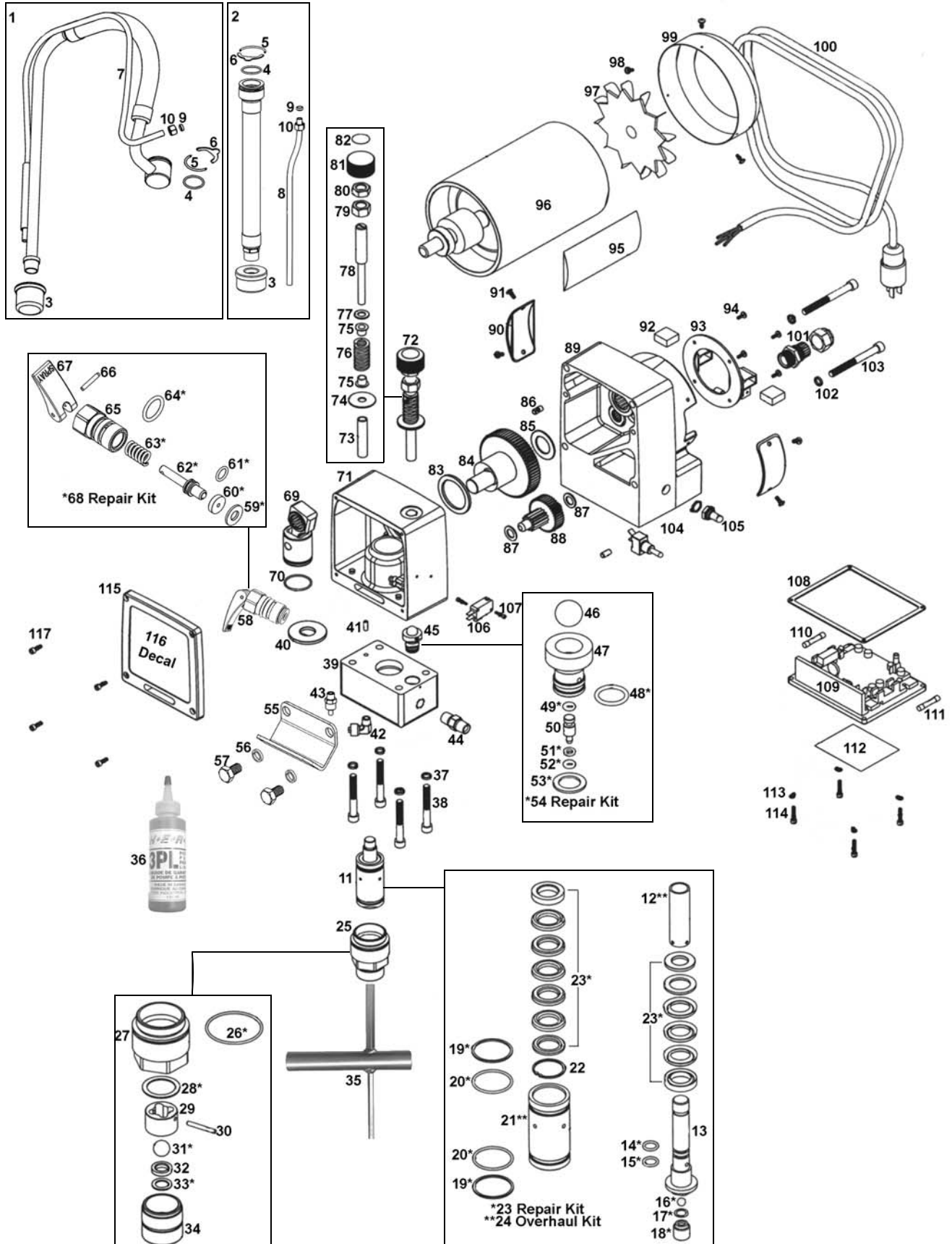
Lubricate the seals and install the stem in the reverse fashion. Install the knob and pin.

Thread the valve knob through the housing counter clockwise until it bottoms out. Drop new ball into valve housing.

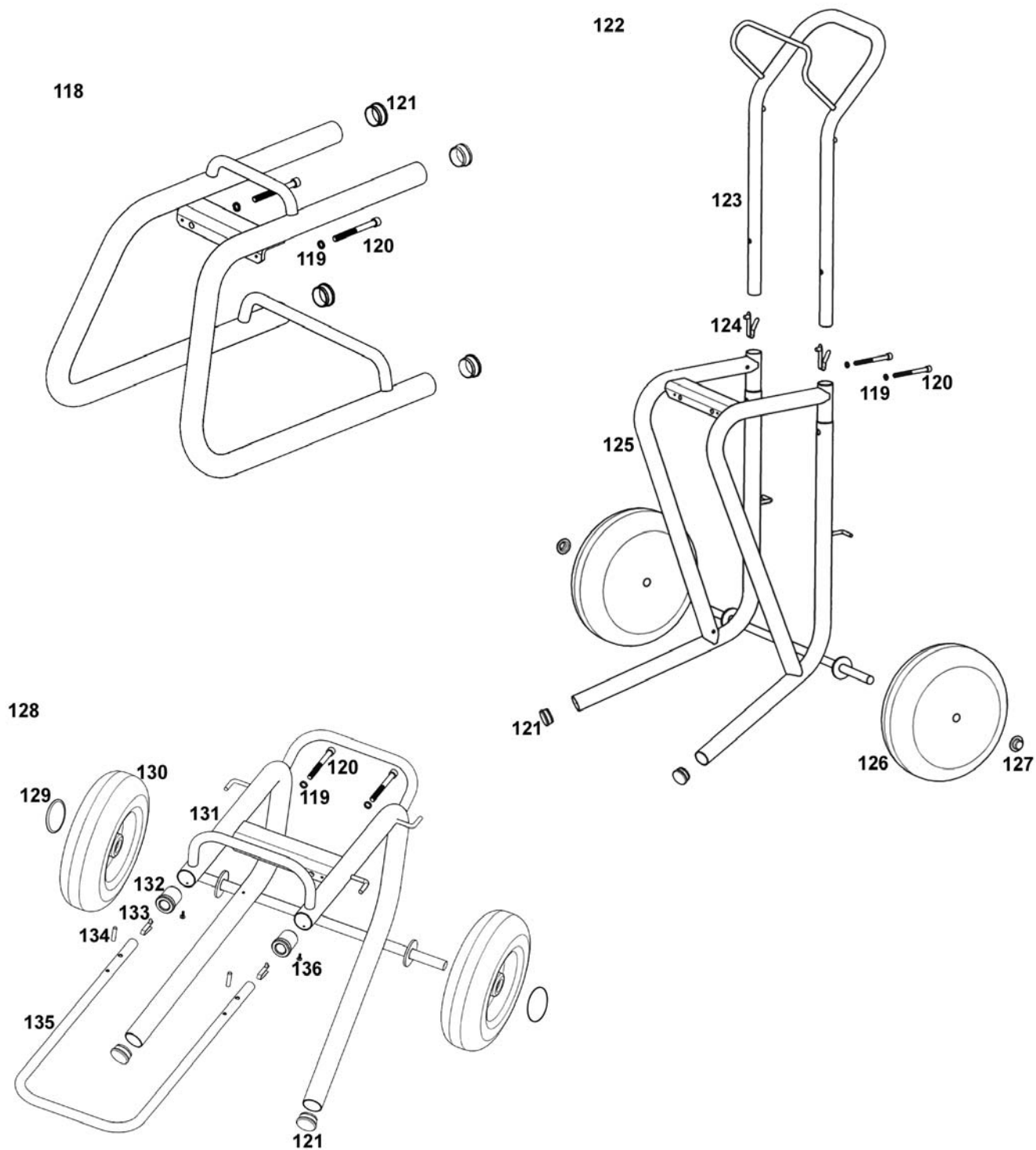
Apply a liberal amount of grease to both sides of seat. Place into end of housing, with the tapered end towards the ball. Add crush washer to the assembly. The grease will hold the parts to gather while you thread the assembled parts into the manifold. Tighten securely.

NOTE: The grease will be flushed out during the prime cycle on the next use.

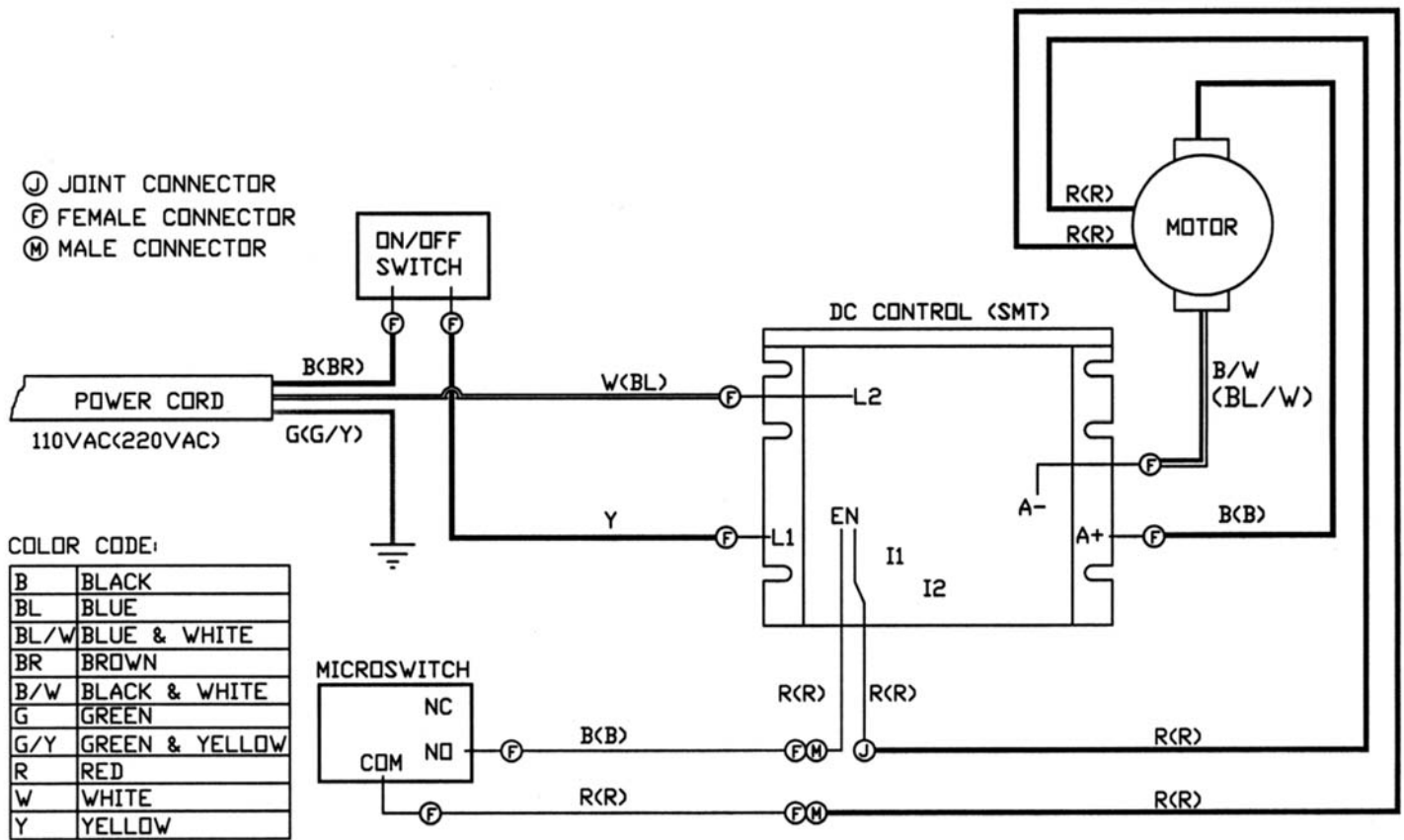
PARTS BREAKDOWN



CART PARTS BREAKDOWN



WIRING SCHEMATIC



PARTS LIST & DESCRIPTIONS

REF#	PART #	DESCRIPTION	QTY
1	HK2560	Siphon Hose Assembly, Sled and Low Boy Models, Includes Ref # 1,3 -7,9,10	1
2	HK2600	Siphon Hose Assembly, High Boy Models, Includes Ref # 2 - 6,8 -10	1
3	187F	Siphon Screen, Fine Mesh	1
4	HK2035	O-Ring, Quick Disconnect	1
5	HK2030	Spring, Quick Disconnect	1
6	HK2025	Retainer, Quick Disconnect	1
7	HK2570	Prime Tubing, 3/8" O.D X 42", Sled and Low Boy Models	1
8	HK2630	Prime Tubing, 3/8" O.D X 15 -1/2", High Boy Models	1
9	HK3027	Compression Sleeve, Prime Valve Fitting	1
10	HK3026	Compression Nut, Prime Valve Fitting	1
11	HK2500C	Fluid Cartridge Assembly, Includes Ref # 12 - 23	ASSY
12	HK2195	Piston Sleeve, SS	1
13	HK2190	Piston Valve Body	1
14	HK2055	Piston Valve Body O-Ring	1
15	HK2220	Piston Valve Body O-Ring (Brown)	1
16	667-43-3	Piston Valve Ball, 1/4"	1
17	HK2060	Piston Valve Seat Washer	1
18	HK2605	Piston Valve Seat	1
19	HK2100	Cylinder Back Up Washer	2
20	HK2095	Cylinder O-Ring	2
21	HK2200	Cylinder, SS	1
22	HK2215	Cylinder Retaining Clip	1
23	HK2510C	Packing Repair Kit, Includes Ref # 14, 15, 16, 17, 19, 20, 23, 26, 28, 31, 33	KIT
24	HK2520C	Packing Overhaul Kit, Includes Ref # 12, 21, 23	KIT
25	HK2590	Intake Valve Assembly, Includes Ref # 26 - 34	ASSY
26	HK2150	Intake Valve Housing O-Ring	1
27	HK2130	Intake Valve Housing	1
28	HK2160	Intake Valve Crush Washer	1
29	HK2155	Intake Valve Ball Guide	1
30	02-40-2005	Intake Valve Ball Guide Stop	1
31	02-40-2004	Intake Valve Ball	1
32	HK2145	Intake Valve Seat	1
33	HK2165	Intake Valve Seat Crush Washer	1
34	HK2140	Intake Valve Inlet Fitting	1
35	HK1000	Hero "Unitool™" H2K Repair Tool	1
36	4-02-40-3PL1	Pump Packing Lubricant, 8 oz. Bottle	1
37	3-1	High Collar Lock Washer, 5/16"	4
38	HW1077	Capscrew, Socket Head, 5/16" x 2-1/4", Grade 8	4
39	HK2170 HK2230	Manifold, Sled & Low Boy Units Manifold, High Boy Models	1 1
40	HK2185	Seal Washer	1

PARTS LIST & DESCRIPTIONS

REF#	PART #	DESCRIPTION	QTY
41	05-40-5020	Dowel Pin	1
42	HK3025	Prime Hose Elbow Fitting, Includes Ref #9 &10, Sled & Low Boy Models	1
43	HK3035	Prime Hose Fitting, Includes Ref #9 &10, High Boy Models	1
44	14A	Outlet Fitting	1
45	HK5625	Pressure Transducer Assembly, Includes Ref # 46-53	ASSY
46	02-40-2004	Pressure Transducer Ball	1
47	HK5115	Pressure Transducer Housing	1
48	HK5205	Pressure Transducer Housing O-Ring	1
49	HK5240	Pressure Transducer Stem O-Ring	1
50	HK5215	Pressure Transducer Stem	1
51	HK52101	Pressure Transducer Stem Back Up Ring	1
52	HK5225	Pressure Transducer Stem O-Ring	1
53	HK5200	Pressure Transducer Crush Washer	1
54	HK5715	Pressure Transducer Repair Kit, Includes Ref # 48, 49, 51-53	KIT
55	HK6555	Pail Hook, High Boy Models	1
56	3-1	High Collar Lock Washer, 5/16"	2
57	HW1060P	Capscrew, Socket Head, 5/16" x 3/4"	2
58	HK3600	Prime Valve Assembly, Includes Ref # 59-67	ASSY
59	11A-3CP	Prime Valve Crush Washer	1
60	HK3040	Prime Valve Seat	1
61	HK2055	Prime Valve Stem O-Ring	1
62	HK3605	Prime Valve Stem	1
63	HK3060	Prime Valve Spring	1
64	02-22-2007	Prime Valve Housing O-Ring	1
65	HK3045	Prime Valve Housing	1
66	HK3070	Prime Valve Pin	1
67	HK3015	Prime Valve Lever	1
68	HK3600RK	Prime Valve Repair Kit, Includes Ref # 59-64,	KIT
69	HK5635	Con-Rod Coupler Assembly	ASSY
70	HK2095	Con-Rod Coupler O-Ring	1
71	HK5650 HK5660	Drive Housing, Red, 3819 Models Drive Housing, Blue, 5523 Models	1 1
72	HK5665	Pressure Sensor Assembly, Includes Ref # 73-82	ASSY
73	HK5090	Pressure Sensor Rod	1
74	HW5021P	Pressure Sensor Flat Washer	1
75	HK5250	Pressure Sensor Spring Sleeve	2
76	HK5310	Pressure Sensor Spring	1
77	HW5050P	Pressure Sensor Stem Washer	1
78	HK5670	Pressure Sensor Stem	1
79	HW4075P	Pressure Sensor Lower Jam Nut	1
80	HW4077P	Pressure Sensor Upper Jam Nut	1
81	HW5080	Pressure Sensor Adjustment Knob	1
82	DEC-MAXPRE RD	Decal "Maximum Pressure"	1

PARTS LIST & DESCRIPTIONS

REF#	PART #	DESCRIPTION	QTY
83	05-40-5012	Thrust Washer	1
84	HK5525 HK5530	Crankshaft Gear Assembly, 3819 Models Crankshaft Gear Assembly, 5523 Models	ASSY ASSY
85	05-40-5015	Thrust Washer	1
86	HK5155	Dowel Pin	2
87	HK5055	Thrust Washer	2
88	HK5505	Reduction Gear Assembly	ASSY
89	HK5545 HK5550	Motor End Bell Assembly, Red, 3819 Models Motor End Bell Assembly, Blue, 5523 Models	ASSY ASSY
90	HK5452 HK5454	Motor Brush Cover, Red, 3819 Models Motor Brush Cover, Blue, 5523 Models	2 2
91	HK5450	Motor Brush Cover Screw	2
92	HK5456 HK5457	Motor Brush Set, 3819 Models Motor Brush Set, 5523 Models	KIT KIT
93	HK5458	Motor Brush Holder, Includes Ref # 94	1
94	HW30062P	Motor Brush Holder Screw, 6-32 x 1/4" Pan Head Phillips, SS	4
95	DEC-H2K-WARN	Warning Decal	1
96	HK5140 HK5145 HK5315 HK5320	.6 HP DC Motor 110 VAC, Less Endbell, 3819 Models .9 HP DC Motor 110 VAC, Less Endbell, 5523 Models .6 HP DC Motor 220 VAC, Less Endbell, 3819 Models .9 HP DC Motor 220 VAC, Less Endbell, 5523 Models	1 1 1 1
97	HK5460	Motor Fan	1
98	HK5466	Motor Fan Cover Screw	3
99	HK5462	Motor Fan Cover, Red, 3819 Models	1
	HK5464	Motor Fan Cover, Blue, 5523 Models	1
100	HK5600 HK5602	Electrical Cord, 110 VAC Models Electrical Cord, 220 VAC Models	1 1
101	05-700-5173	Electrical Cord Connector	1
102	3-1	High Collar Lock Washer, 5/16"	2
103	HW1079	Capscrew, Socket Head, 5/16" x 3", Grade 8	2
104	HK5160	On/Off Switch	1
105	HK5165	On/Off Switch Boot	1
106	HK5105	Micro Switch	1
107	HW30055	Capscrew, Socket Head, 4-40" x 3/4"	2
108	HK6015	Circuit Board Gasket	1
109	HK5645 HK5647 HK5655 HK5657	Circuit Board with Gasket, 110 VAC, 3819 Models Circuit Board with Gasket, 110 VAC, 5523 Models Circuit Board with Gasket, 220 VAC, 3819 Models Circuit Board with Gasket, 220 VAC, 5523 Models	1 1 1 1
110	HK5171 HK5327	Fuse, 15A, 110 VAC Models Fuse, 8A, 220 VAC Models	1 1
111	HK5172 HK5326	Fuse, 25A, 110 VAC Models Fuse, 12A, 220 VAC Models	1 1
112	DEC-H2K-WARN	Warning Decal	1
113	HW50081	High Collar Lock Washer, #8	4
114	HW3021	Capscrew, Socket Head, 8/32" x 1/2"	4

PARTS LIST & DESCRIPTIONS

REF#	PART #	DESCRIPTION	QTY
115	HK6535	Gear Housing Cover with Decal, 3819 Models	1
	HK6540	Gear Housing Cover with Decal, 5523 Models	1
116	DEC-3819	Front Label, 3819 Models	1
	DEC-5523	Front Label, 3819 Models	1
117	HW3021	Capscrew, Socket Head, 8/32" x 1/2"	4
118	HK6520	Sled Cart Assembly, Includes Ref # 121	ASSY
119	3-1	High Collar Lock Washer, 5/16"	2
120	HW1077	Capscrew, Socket Head, 5/16" x 2-1/4", Grade 8	2
121	HK6020	End Caps, 1-1/4", All H2K Models	2 or 4
122	HK6560	High Boy Cart Assembly, Includes Ref # 121, 123, 124, 125, 126, 127	ASSY
123	06-40-6000	Sliding Handle, High Boy Models	1
124	633F	Sliding Handle Spring Clip, High Models	2
125	HK6550	High Boy Cart Less Ref # 121, 123, 124, 126, 127	1
126	67/16A	10" Pneumatic Wheel	2
127	HW6088	Axle Caps, 5/8", High & Low Boy Models	2
128	HK6530	Low Boy Cart Assembly, Includes Ref # 121, 127, 129, 130, 131, 132, 133, 134, 135, 136,	ASSY
129	HK6030	Wheel Hub Cap, Low Boy Models	2
130	HK6025	Wheel, Less Hub Cap, Low Boy Models	2
131	HK6510	Low Boy Cart Less Ref # 121, 127, 129, 130, 132, 133, 134, 135, 136,	1
132	HK6055	Sliding Handle Insert, Low Boy Models	2
133	HK6070	Sliding Handle Spring Clip, Low Boy Models	2
134	HK6060	Sliding Handle Pin, Low Boy Models	2
135	HK6515	Sliding Handle, Low Boy Models	1
136	HW30062P	Machine Screw, 6-32 x 1/4" Pan Head Phillips	2

H2K 3819/5523

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BURNABY, B.C.
CANADA

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FAX: 604-420-8725

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SERIAL #: _____

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H2K

AIRLESS SPRAY EQUIPMENT



**3819S
5523S**



**3819H
5523H**



**3819C
5523C**

H•E•R•O

HERO Products Group

Version 5 Dec 2005

SAFETY AND OPERATING MANUAL



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AND UNDERSTANDING ALL SAFETY AND OPERATING INSTRUCTIONS
SEE PAGES 3 – 8**



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